

### **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

1. (currently amended) Electro-acoustic resonator (1, 8, 17) comprising a membrane structure FBAR (1) with a layer structure comprising a piezoelectric layer (5, 14, 24) and a top (6, 15, 25) and a bottom (4, 13, 23) electrode layer, with the thickness (T1, T2, . . . T6) of the two electrode layers being unequal, characterised in that the top electrode layer (T1, T3, T5) is thinner than the bottom (T2, T4, T6) electrode layer to increase a filter bandwidth of the electro-acoustic resonator.
2. (cancelled)
3. (previously presented) Electro-acoustic resonator (1, 8, 17) as claimed in claim 1, characterised in that at least one of the electrode layers is formed by a stack of conductive materials (25, 26 or 22, 23).
4. (previously presented) Electro-acoustic resonator (1, 8, 17) as claimed in claim 3, characterised in that between the stacked conductive materials of the electrode layers (22 and 23 and/or 25 and 26) a conductive thin diffusion barrier is formed.
5. (previously presented) Electro-acoustic resonator (1, 8, 17) as claimed in claim 3, characterised in that in the stack, the conductive material (23, 25) that is in contact with the piezoelectric layer (24) has a higher acoustic impedance than the conductive material (22, 26) that is not in contact with the piezoelectric layer (24).

6. (previously presented) Electro-acoustic resonator (1, 8, 17) as claimed in claim 3, characterised in that in the stack, the conductive material (23, 25) in contact with the piezoelectric layer (24) has a lower acoustic impedance than the conductive material (22, 26) that is not in contact with the piezoelectric layer (24).
7. (previously presented) Electro-acoustic (1, 8, 17) resonator as claimed in claim 5, characterised in that the conductive material with the lower acoustic impedance comprises Aluminium (Al).
8. (previously presented) Electro-acoustic resonator (1, 8, 17) as claimed in claim 5, characterised in that the conductive material with the higher acoustic impedance comprises platinum (Pt), tungsten (W), molybdenum (Mo), titan- tungsten ( $Ti_xW_{1-x}$ ,  $0 < x < 1$ ), Gold (Au).
9. (previously presented) Electro-acoustic resonator (1, 8, 17) as claimed in claim 4, characterised in that the diffusion barrier between the stacked conductive materials of the electrode layers (22 and 23 and/or 25 and 26) consists of titanium nitride (TiN), or titanium (Ti), or consists of combinations of titanium nitride (TiN) and titanium (Ti).
10. (previously presented) Electro-acoustic resonator (1, 8, 17) as claimed in claim 1, characterised in that the electrode layers (4, 6, 13, 15, 23, 25) comprise Molybdenum (Mo) and that, for a resonant frequency in the region of 2 GHz, the thickness (T1, T3, T5) of the top Molybdenum layer (6, 15, 25) is in the region of 200 nm and the thickness (T2, T4, T6) of the bottom Molybdenum layer (4, 13, 23) is in the region of 300 nm, these thicknesses scaling approximately inversely with resonant frequency.
11. (previously presented) Electro-acoustic resonator (1, 8, 17) as claimed in claim 1, characterised in that the electrode layers (4, 6, 13, 15, 23, 25) comprise platinum (Pt) and that, for a resonant frequency in the region of 2 GHz, the thickness (T1, T3, T5) of the top platinum layer (6, 15, 25) is in the region of 50 nm and the thickness (T2, T4, T6) of the bottom platinum layer (4, 13, 23) is in the region of 150 nm, these thicknesses scaling approximately inversely with resonant frequency

12. (previously presented) Use of an electro-acoustic resonator (1, 8, 17) as claimed in claim 1, as a component of a radio frequency (RF) filter, or as a component used in a sensor, or used in an ultrasonic transducer, or used in an array of ultrasonic transducers.

13. (new) Electro-acoustic resonator (1, 8, 17) as claimed in claim 1, characterised in that a relative thickness of the two electrode layers maximizes the filter bandwidth.

14. (new) Electro-acoustic resonator (1, 8, 17) as claimed in claim 1, characterised in that a relative thickness of the two electrode layers maximizes a coupling factor of the electro-acoustic resonator (1, 8, 17).

15. (new) Electro-acoustic resonator (1, 8, 17) as claimed in claim 1, characterised in that a coupling factor of the electro-acoustic resonator (1, 8, 17) is greater than 0.215.